



Forest Insect & Disease Management

Survey Report

S-18-75

September 1975

SPRUCE BUDWORM AERIAL SURVEY OTTAWA NATIONAL FOREST, MICHIGAN 1975

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INTRODUCTION The spruce budworm, Choristoneura fumiferana (Clem.), was reported by Erickson in 1972 to be causing heavy defoliation of white spruce for the third year in and around the white spruce seed production area on U. S. Highway 45, south of Watersmeet.^{1/} Heavy defoliation was again reported in 1974 by Fowler.^{2/} No aerial survey of spruce budworm defoliation was made in 1973 or 1974 on the northern half of the Forest. The current status of spruce budworm defoliation was unknown.

OBJECTIVE To determine the location, acreage, and severity of spruce budworm defoliation on the Ottawa National Forest.

METHOD In July 1975, preplanned flight lines were flown in a Cessna 172 between 9:30 am and 2:00 pm, at 1,500 feet above ground at 110 mi/h air speed. Marion True, Forest Pest Specialist, Ottawa National Forest, and I sketch-mapped the boundaries of currently defoliated white spruce and balsam fir stands on 1/4-inch-to-the-mile Forest maps. The following codes were used to designate severity of defoliation and stand condition:

<u>Defoliation</u>	<u>Stand Condition</u>
L - Light to Moderate, 0-50% of crown showing reddish-brown discoloration.	<u>No</u> tree mortality or top kill.
H - Heavy, 51-100% of crown showing reddish-brown discoloration.	<u>No</u> tree mortality or top kill.
S - Severe, 51-100% of crown showing reddish-brown and grey discoloration.	<u>Tree mortality and top kill.</u>

^{1/} Erickson, Glen. "Aerial Survey of Aspen and Balsam Fir-Spruce Defoliation on the Ottawa N.F., Michigan-1972." NA S&PF, St. Paul Field Office, Report S-3-72, July 1972.

^{2/} Fowler, Richard F., "Spruce Budworm Defoliation-1974-Ottawa National Forest." NA S&PF, St. Paul Field Office, Report S-5-74.

NORTHEASTERN AREA, STATE & PRIVATE FORESTRY
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Ground checks were conducted to verify location and severity of defoliated areas.

RESULTS

Heavy defoliation was observed this year on the Forest, north of Highway 28. Heavy defoliation is continuing in the southern half with extensive tree mortality and top kill in the balsam fir (Figure 1). White spruce in the seed production area is continuing to show heavy defoliation with no observed tree mortality or top kill. The gross acres defoliated which includes some mixed hardwood types, are listed below by class:

<u>Defoliation</u>	<u>Acres</u>
Light to Moderate	31,840
Heavy	72,960
Severe	<u>44,480</u>
Total	149,280

OTTAWA NATIONAL FOREST, MICHIGAN

